

IN THE CLAIMS:

Please add new claim 32 and amend claims 1, 4, 6, 7, 9, 15, 20 and 26 as follows.

1. (Currently Amended) A device for measuring the properties of high-gloss or metallic finishes in particular of vehicle bodies, having:

at least one first radiation means having at least one first radiation source which directs substantially collimated radiation at a predetermined angle towards a measurement surface;

~~at least one~~ a plurality of second radiation means having at least one second radiation source, each of which projects substantially non-collimated radiation onto the measurement surface; and

at least one radiation detector means which captures at least a portion of the radiation reflected and/or diffused off the measurement surface and emits at least one measurement signal which is characteristic of the reflected and/or diffused radiation,

wherein said radiation detector means ~~comprising~~ comprises a device ~~suitable~~ for detecting incident radiation dependent on a wavelength of said radiation;

~~wherein said at least one second radiation means comprises at least one radiation diffuser means, mounted at a specified diffuser surface angle relative to a geometrical connecting axis extending from said second radiation means to a geometrical center of the measurement surface, wherein a spatial orientation and~~

~~position of a diffusor surface of said at least one second radiation means is variable relative to the geometrical connecting axis.~~

2. (Previously Presented) The device according to claim 1,  
wherein an angle formed by a first geometrical connecting axis  
extending from the at least one radiation detector means to a geometrical center of  
the measurement surface and a projection of said first geometrical connecting axis  
to the measurement surface is variable.

3. (Previously Presented) The device according to claim 1,  
wherein a distance from said first radiation means to the  
measurement surface is between 1 cm and 30 cm, preferred between 2 cm and 20  
cm, particularly preferred between 2 cm and 7 cm.

4. (Currently Amended) The device according to claim 1,  
wherein ~~substantially non-collimated radiation is emitted onto the~~  
~~measurement surface from each said~~ plurality of said at least one second  
radiation means comprises at least one radiation diffusor means.

5. (Cancelled)

6. (Currently Amended) The device according to claim 14,  
wherein said at least one radiation diffuser means is selected from a  
group of radiation diffuser means comprising radiation diffuser disks, frosted  
glass disks and diffuser films.

7. (Currently Amended) The device according to claim 14,  
wherein a diffuser surface of each said radiation diffuser means is  
mounted at a specified diffuser surface angle relative to the measurement surface,  
said angle defined by a geometrical connecting axis extending from a longitudinal  
axis of each said second radiation means to a geometrical center of the  
measurement surface, said specified diffuser surface angle is being between 0  
degrees and 90 degrees, preferred between 30 degrees and 90 degrees, particularly  
preferred between 75 degrees and 90 degrees.

8. (Cancelled)

9. (Currently Amended) The device according to claim 1,  
wherein said at least one first radiation means and ~~at least one said~~  
plurality of second radiation means are positioned in a housing above the  
measurement surface.

10. (Previously Presented) The device according to claim 9, wherein a space inside the housing has substantially radiation-absorbing properties.

11. (Previously Presented) The device according to claim 9, wherein said housing is substantially configured radiation-proof, preferably light-proof, such that substantially no radiation can enter the housing other than such radiation as diffused and/or reflected off the measurement surface.

12. (Previously Presented) The device according to claim 1, wherein said second radiation means are positioned on a geometrical spherical surface or a geometrical surface of a rotational ellipsoid above the measurement surface.

13. (Previously Presented) The device according to claim 1, wherein at least one radiation source is variable in at least one radiation parameter selected from a group comprising radiation intensity, radiation wavelength, direction of radiation polarization, and temporal radiation intensity modulation.

14. (Previously Presented) The device according to claim 1,  
wherein at least two of said first and second radiation sources are  
variable independent of each other in at least one radiation parameter.

15. (Currently Amended) The device according to claim 1,  
wherein said ~~at least one~~ first and second radiation sources are  
selected from a group of radiation sources comprising thermal radiation sources, in  
particular but not exclusively light bulbs, halogen light bulbs, coherent and non-  
coherent semiconductor radiation sources, gas discharge radiation sources and  
lasers.

16. (Previously Presented) The device according to claim 1,  
wherein at least two of said first and second radiation sources and/or  
radiation detector means have different spectral radiation characteristics.

17. (Previously Presented) The device according to claim 1,  
wherein the radiation from said first radiation means is collimated by  
at least one radiation directing means.

18. (Previously Presented) The device according to claim 17, wherein said at least one radiation directing means comprises at least one radiation directing component selected from a group of radiation directing components comprising lens components, micro lens components, micro lens arrays, diffracting components, reflector components, in particular but not exclusively parabolic reflectors, grating components, volume grating components and holographic components.

19. (Previously Presented) The device according to claim 1, wherein said first radiation means comprises at least one diaphragm means, preferably but not limited to apertured diaphragms positioned in a path of radiation.

20. (Currently Amended) The device according to claim 1, wherein said device is ~~preferably~~ movable relative the measurement surface such that a distance between the first and second radiation means and the measurement surface remains substantially constant.

21. (Previously Presented) The device according to claim 1, wherein at least one travel measurement means is provided which emits at least one measurement signal corresponding to a traveled distance of the travel measurement means from the device to the measurement surface.

22. (Previously Presented) The device according to claim 21,  
further including a housing;

wherein said at least one travel measurement means is positioned  
inside and/or outside the housing.

23. (Previously Presented) The device according to claim 1,  
wherein at least one coating-thickness measurement means is  
provided for determining a coating thickness of the measurement surface to be  
examined comprising at least one coating thickness sensor which emits a  
measurement signal representative of the coating thickness to be determined.

24. (Previously Presented) The device according to claim  
23, further including a housing;

wherein said at least one coating-thickness measurement means is  
positioned inside and/or outside the housing.

25. (Previously Presented) The device according to claim 1,  
further including a travel measurement means and a coating-thickness  
measurement means;

wherein at least one processor means and one memory means is  
provided which allow an allocation of the measurement signals of the radiation

detector means and/or the measurement signals of the travel measurement means and/or the coating-thickness measurement means to specified locations, in particular but not exclusively to the same location on the measurement surfaces.

26. (Currently Amended) A method for measuring the properties of high-gloss or metallic finishes in particular of vehicle bodies, in particular using a device according to claim 1,

comprising said at least one first radiation means, and wherein

said ~~at least one~~ plurality of second radiation means ~~projects~~ project at least a portion of the radiation from said at least one second radiation source onto the measurement surface;

said at least one radiation detector means captures at least a portion of the radiation reflected and/or diffused off the measurement surface and emits at least one measurement signal which is characteristic of the reflected radiation;

at least one control means is provided for controlling the capture of the measurement signals of the radiation detector means; and

at least one output means is provided for outputting at least one measurement result.

27. (Previously Presented) The method according to claim 26, wherein at least one processor means is provided for evaluating the measurement signals and deriving therefrom at least one parameter which



characterizes the properties of the measurement surface and which can be output at least on one output means.

28. (Previously Presented) The method according to claim 26, further including a travel measurement means and a coating-thickness measurement means;

wherein at least one control means is provided for controlling the capture of the measurement signals from the radiation detector means and/or the travel measurement means and/or the coating-thickness measurement means and stores same in at least one provided memory means.

29. (Previously Presented) The method according to claim 26, wherein the radiation from said second radiation means is substantially reflected and/or diffused only once off the measurement surface and/or off a surface substantially parallel thereto.

30. (Previously Presented) The device according to claim 1, wherein a space above the measurement surface has substantially radiation-absorbing properties.

31. (Previously Presented) The device according to claim 1, wherein an angle formed by a second geometrical connecting axis extending from the at least one first radiation means to the geometrical center of the measurement

surface and a projection of said second connecting axis onto the measurement surface, is variable.

32. (New) The device according to claim 7, wherein a spatial orientation and position of said diffuser surface of said radiation diffuser means is variable relative to said geometrical connecting axis from said second radiation means to said geometrical center of the measurement surface.